Being a Digital Service Provider

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The questions for Communications Service Providers (CSPs) and Data Center Operators is: *"what are their enterprise customers going to want next?"* And, it's a crucial question to ask, even if they themselves don't know the answer yet.

At a high level, we know enterprise customers generally want operational efficiencies, lower costs, and greater agility to consume, deploy, performance-tune, and manage IT resources.

What if you could have it all?

- What if—as a major enterprise company or as a 'ma and pa' grocery store—you could log into one single portal and supply your company with everything it needed from an IT perspective?
- What if you could get *all* of your cloud services through this portal—regardless of provider?
- What if your network could be supplied to you on-demand, like a utility?
- What if you could track, slice, dice, and chargeback all of your IT services in a reliable manner?
- What if all your IT resources could be correlated and monitored as you manage for performance? For example, do you have enough compute or are you lacking in network capacity?
- What if your solution was one click of on-demand, real-time services away?
- What if you could grow, shrink, or change your network on-demand through the same portal that you manage, compare, and contrast your public, private, and hybrid cloud services? Do you have to make sure that your utility provider has proper circuit breakers in place on its way from your provider? Do you have to have a full-time staff of electricians to make sure that your electricity gets from the water dam to your facility?
- What if the combination of SDN, SD-WAN, NFVs, SaaS providers, Cloud providers, containerization, AI (Artificial Intelligence) and machine learning—aggregated into a single pane of glass view—could create an ecosystem from which you could manage all of your IT needs and resources?
- What if that same portal insured your security and governance models, and what if your users could largely help themselves to what they're entitled to do?
- What if you unleashed the power of your employees' creativity by granting them controlled freedom to use technology to make your company better?
- What if your employees could self-manage costs and be rewarded for keeping your costs down?
- What if you knew exactly what the cost of a new office facility was at any moment in time for all things IT?

What does an enterprise need?

Answering the question completely is impossible, because no one knows for sure. Enterprises are constantly changing organisms with differences from company to company in every use case. It's called differentiation. Therefore, we can't provide everything enterprises need out of the box, but we CAN do a much better job of giving them access to everything they might need from one portal, allowing them to gain operational efficiencies, lower costs and greater agility to consume, deploy,

performance-tune and manage IT their resources.

Who is going to provide this kind of portal?

Who is going to be first to put it all together, bundle it up and make it easy to use? It's a brave new world for CSPs to survive in outpacing technology year over year. Emerging connected technology such as the Internet of Things (IoT) has placed additional strain on network infrastructure and driven demand for faster data, more bandwidth, better uptime and a more reactive network. CSPs have their hands full, but if they don't look to the future, they will be left behind.

However, as Fidelity noted, despite growing network usage figures, telecom profits haven't necessarily increased to go along with higher user demand. With telecom network services being increasingly commoditized, providers need to find new sources of revenue to maintain their profitability and feed enterprise appetite for advanced network features, more flexibility, and a more satisfying overall user experience. But what if network providers began to offer on-demand services? I may not want to buy network capacity, firewalls, load balancers, and people to design, manage and build it all. Maybe I'd rather just buy connectivity where I need it, know it will be there when I want it, and be confident that it will be performant and secure.

In short, these companies need to stop being just telecom service providers and become digital service providers.

Virtualization finds a business case

The early days of virtualization in telecom—network function virtualization, in particular—were characterized by largely theoretical applications. CIMI Corporation President and Gartner contributor Tom Nolle stated that NFV and other virtualization technologies' benefits were generally viewed in the abstract, and companies had trouble seeing tangible use cases within their own operations.

"Most everyone agreed this was a better and more flexible approach, but it was also totally different, complicated and didn't seem to have any accepted business-value propositions to drive it," stated Noelle. "The specific benefits were unclear, as was the path to them."

The technology has proved to be far from an empty promise in recent years, paving the way for CSPs to lower operational costs while also creating new avenues of service delivery, new products, and services. CSPs also stand to find the opportunity to provide managed services due to their ability to scale both knowledge and skills across multiple customers.

So, what changed?

Communications service providers have found that by virtualizing the network, they can build out capabilities without needing to add on expensive hardware. Software, rather than physical devices, can power many different network tools. That being the case, telecom providers can begin to manage at scale. Once that door was opened, the potential applications became nearly endless. Virtualization can lead to the development of new on-demand services and revenue opportunities, and enterprise and SMB customers stand to benefit immensely from this arrangement.

Creating virtualized services for enterprise customers

Virtualization technology allows communications service providers (and their customers) to spin up new features faster than ever before and deliver them to customers whenever needed. CSP customers can apply additional features like virtual firewalls, storage, and expanded bandwidth in

an on-demand model. While we refer more to VNFs here, it is only a matter of time until CSPs are able to reach inside the data center through Cloud service providers to meet a more comprehensive range of customer needs.

Customers can build out or contract these tools as they like and pay only for what they use. In this way, service providers can employ payment models that are more in line with utilities than with the traditional telecom company model. That pay-as-you-go approach will help improve the overall customer experience by providing more transparency into service costs and giving users the final say on what features are included in their service packages.

Enterprise customers stand to benefit immensely from this arrangement, as they will be able to incorporate numerous network, cloud and virtualized features from a single service provider via a single portal with a single governance and policy management solution. Even modestly sized businesses (SMBs) require a great deal of performance and capabilities from their networks, but enterprise environments are more complex and demanding by orders of magnitude. Small companies just want to log in and get what they need simply and easily without going to multiple, confusing outlets. Morever, some small companies may not even have the IT staff to support greater complexity.

Enterprises require—among other things—advanced network security capabilities, SD-WAN solutions to improve connectivity and application-level management at branch locations and additional bandwidth to manage traffic spikes. A company may go to different vendors for each one of those solutions, but with virtualization technology, it could conceivably get all three—plus much more—from a single service provider.

Completing the digital transformation evolution

This reinvention from communications service provider to digital service provider won't happen overnight, but there are concrete steps CSPs companies can take right now to start down that path. Automation, for one, is a very important piece to this particular puzzle. Noelle explained that by incorporating automation from top to bottom, organizations could reduce the amount of time needed to provision service add-ons and roll out new features.

CSPs can streamline their journey to virtualization maturity by working with an experienced telecom software solution partner. Most telecom companies don't realize that the future is closer and more attainable than they think.

Digital transformation has already swept through various industries like a force of nature, and it was only a matter of time until it hit the telecom space. Driven by strained networks and increasing customer expectations, demand for innovative, flexible, agile solutions that improve data speeds, connectivity, availability, and customer experience is through the roof for CSPs.

Where are the opportunities for telecom innovation? These emerging communications technologies may point the way toward better network capabilities, stronger revenue streams, and healthier bottom lines.

Where CSP pain points exist

According to consulting firm Deloitte, one of the main challenges facing the CSP industry in the immediate coming years is maintaining a high quality of service across different offerings. Further complicating matters is the fact that the network upgrades needed to support expanded, advanced services in some cases may be prohibitively expensive.

How can CSPs meet demand for better availability and faster speeds without a significant overhaul of existing infrastructure? The answer lies in taking advantage of emerging communications technologies like Software-Defined Networking (SDN) and SD-WAN and VNFs:

"[O]perators will be moving away from proprietary, hardware-based network equipment to software-based network functions with technologies such as SDN and Network Function Virtualization (NFV)," stated Deloitte Vice Chairman Craig Wigginton. "This shift should allow them to manage their networks more efficiently and effectively and be more responsive to changes in consumer preferences."

SDN and NFV not only promise to empower CSPs to better utilize available bandwidth, but they also will create new services, new streams of revenue, and increased profits. CSPs can offer customers the option to pay an additional premium to scale up network capabilities on-demand to meet their bandwidth needs. As control of networks and associated network services become increasingly centrally managed, CSPs will see more and more opportunities to offer managed services so that enterprises can offload that responsibility.

Meeting bandwidth demand without investing in network infrastructure will be a challenge—but it's possible.

Putting an end to manual processes with portal-driven customer experience

The CSP industry in general continues to depend on a large number of manual processes and workflows from top to bottom. Software-driven automation will help streamline just about every aspect of CSPs and lay the foundation for more substantial and dynamic service creation. For instance, automation at the OSS/BSS level can pave the way for on-demand, self-service capabilities. Telcos can then create customer-focused portals where users can try out and add on new features as they see fit.

Self-service portals will become key components to cultivating a better all-around customer experience. People want to have more control over their telecom accounts as well as have the ability to make changes, view billing information and contact customer service support when it suits them best. Cloud-based portals provide that opportunity in a single, intuitive platform.

Moving to the edge and beyond

Edge technologies show a lot of promise for the CSP industry as well. SD-WAN has already been a major revenue generator for many companies, and other businesses can follow that lead in providing customers with more flexible company network environments. This technology is especially useful for organizations that struggle to maintain high standards of connectivity at their branch offices.

Other technologies that reside at the edge of the network can be hugely beneficial as well—namely, virtual customer premises equipment (vCPE), Virtualized Network Functions (VNFs) and interconnects.

Is there any reasons CSPs cannot become cloud service brokers to provide everything beyond the edge? CSPs can provide the connectivity TO the cloud. Why not into the cloud? Because of virtualization, CSPs can now quickly and easily reach agreements and federate to increase their respective footprints to better service their customers.

There is an incredible amount of emerging communications technology out there for CSPs to reshape their network environments, establish money-making revenue streams, and exceed customer expectations. Massive network upgrades aren't necessary to maintain high-quality service delivery; companies can achieve similar results by embracing some or all of the telecom innovations that ultimately wrap around the evolution of digital customer experience.

What should Telcos be doing right now?

Self-service on-demand capabilities

Customers everywhere today expect to have some control over account management, and they do not want to wait for a company to respond to a query or service request when they have the option to do it themselves. Whether it's offering troubleshooting tools or online billing management platforms, CSPs should provide their customers some degree of agency to control their accounts.

Salesforce contributor Nicola Brookes noted that customer portals serve a critical function in this regard, giving users tools to manage their accounts, answer questions and address problems without ever needing to pick up a phone or wait for an email response.

For instance, bandwidth-on-demand can be a powerful feature to include in a CSP cloud portal. Users can increase their bandwidth at a moment's notice without needing to call an account manager or carrier representative and have the terms of contract drastically changed. Instead, they can simply select to pay for a temporary increase in bandwidth to meet situational requirements.

Other popular on-demand options include SD-WAN, vCPE, and Interconnects, among many others. Customers should have the ability to add or build out these services as needed at any time.

Single pane of glass for a consolidated view of all your IT services
Whatever features are included in a CSP portal, customers don't want to have to jump through a lot of hoops to take advantage of them. That means simplifying the user interface, so every tool and service is readily available through a single pane of glass. Having a consolidated view is important because CSPs have historically been known to use separate portals for multiple services, especially during times of M&A. Creating a single platform to manage every aspect of a user's account will provide a major competitive advantage.

User experience is critical to any platform's success, and empowering customers to spin up anything from bandwidth-on-demand and SDN to SD-WAN services and next-generation firewalls from a single platform will greatly improve satisfaction levels.